



**STATE OF TENNESSEE
DEPARTMENT OF HEALTH
ENVIRONMENTAL LABORATORIES**

TDH: Lab Services JRL
Lab Services - Jackson Regional Lab
Jackson, TN 38301
731-426-0686

TDH: Lab Services KRL
Lab Services - Knoxville Regional Lab
Knoxville, TN 37920
865-549-5201

TDH: Lab Services NCL
Lab Services - Nashville Central Lab
Nashville, TN 37243
615-262-6300

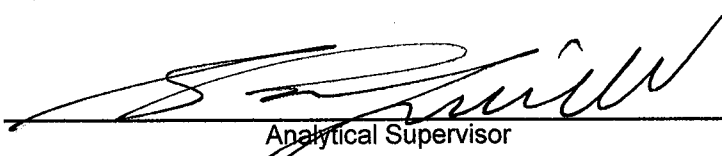
Sent To: Geoff Klein
TDEC-DWS
200 East Race St
Knoxville, TN 37763

Lab ID: N00004280
Nashville Central Laboratory

Sampling Agency: TDEC: Division of Water Supply

Billing Code: 327.39-12

This is to certify that the following results were determined using good laboratory practices and in accordance with federal or state approved methodologies.


Analytical Supervisor

Lab-Sample Number: N00004280001
Project Name:
Sample Description: KINGSTON WTP
Sampler Project Name: RAW
Project Site No.:
Station No.:
Date/Time Collected: 03/16/2009 08:45
Sampler's Name: DAVID BRADSHAW
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-DWS
Billing Code: 327.39-12
Send Report To: TDEC-DWS
Agency Invoiced: TDEC-DWS
Priority Date:
Date/Time Received: 03/16/2009 11:00
Received By: P D Wilson

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	70	mg/L	3.8	10	P Leathers	3/17/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	61	mg/L	0.7	1	P Leathers	3/17/2009

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: N00004280002
Project Name:
Sample Description: KINGSTON WTP
Sampler Project Name: FINISH
Project Site No.:
Station No.:
Date/Time Collected: 03/16/2009 08:50
Sampler's Name: DAVID BRADSHAW
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-DWS
Billing Code: 327.39-12
Send Report To: TDEC-DWS
Agency Invoiced: TDEC-DWS
Priority Date:
Date/Time Received: 03/16/2009 11:00
Received By: P D Wilson

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	71	mg/L	3.8	10	P Leathers	3/17/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	63	mg/L	0.7	1	P Leathers	3/17/2009

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: N00004280003
Project Name:
Sample Description: ROCKWOOD WTP
Sampler Project Name: FINISH
Project Site No.:
Station No.:
Date/Time Collected: 03/16/2009 09:20
Sampler's Name: DAVID BRADSHAW
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-DWS
Billing Code: 327.39-12
Send Report To: TDEC-DWS
Agency Invoiced: TDEC-DWS
Priority Date:
Date/Time Received: 03/16/2009 11:00
Received By: P D Wilson

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	80	mg/L	3.8	10	P Leathers	3/17/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	66	mg/L	0.7	1	P Leathers	3/17/2009

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: N00004280004
Project Name:
Sample Description: ROCKWOOD WTP
Sampler Project Name: RAW
Project Site No.:
Station No.:
Date/Time Collected: 03/16/2009 09:25
Sampler's Name: DAVID BRADSHAW
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-DWS
Billing Code: 327.39-12
Send Report To: TDEC-DWS
Agency Invoiced: TDEC-DWS
Priority Date:
Date/Time Received: 03/16/2009 11:00
Received By: P D Wilson

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	110	mg/L	3.8	10	P Leathers	3/17/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	63	mg/L	0.7	1	P Leathers	3/17/2009

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
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U - Undetected



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Knoxville, TN 37763

Lab ID: N00004280
Nashville Central Laboratory

Sampling Agency: TDEC: Division of Water Supply

Billing Code: 327.39-12

Preliminary Report

Results on this report should only be considered preliminary, and the lab should be contacted for Actual Final Results.

Preliminary Report

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Lab-Sample Number: N00004280001
Project Name:
Sample Description: KINGSTON WTP
Sampler Project Name: RAW
Project Site No.:
Station No.:
Date/Time Collected: 03/16/2009 08:45
Sampler's Name: DAVID BRADSHAW
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-DWS
Billing Code: 327.39-12
Send Report To: TDEC-DWS
Agency Invoiced: TDEC-DWS
Priority Date:
Date/Time Received: 03/16/2009 11:00
Received By: P D Wilson

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	03/18/2009				M Pattanayek	3/18/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Arsenic	U	µg/L	0.93	5	M Pattanayek	3/18/2009
Barium	25	µg/L	2.5	5	M Pattanayek	3/18/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	3/18/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	3/18/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	3/18/2009
Cobalt	0.24J	µg/L	0.04	1	M Pattanayek	3/18/2009
Lead	0.51J	µg/L	0.10	1	M Pattanayek	3/18/2009
Manganese	57	µg/L	0.42	1	M Pattanayek	3/18/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	3/18/2009
Thallium	0.61J	µg/L	0.03	1	M Pattanayek	3/18/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	3/18/2009

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	PENDING	µg/L	0.13		NOT REPORTED	/ /

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Preliminary Report

Results on this report should only be considered preliminary, and the lab should be contacted for Actual Final Results.

Lab-Sample Number:	N00004280002	Field Determinations	
Project Name:		pH:	
Sample Description:	KINGSTON WTP	Chlorine, residual:	
Sampler Project Name:	FINISH	Conductivity:	
Project Site No.:		Temperature:	
Station No.:		Dissolved Oxygen:	
Date/Time Collected:	03/16/2009 08:50	Other:	
Sampler's Name:	DAVID BRADSHAW	Flow:	CFS
County:	ROANE - 73		
Sample Matrix:	Water		
EFO:	Knoxville		
Sampling Agency:	TDEC-DWS		
Billing Code:	327.39-12		
Send Report To:	TDEC-DWS		
Agency Invoiced:	TDEC-DWS		
Priority Date:			
Date/Time Received:	03/16/2009 11:00		
Received By:	P D Wilson		

TEST: Digestion Metals

METHOD: EPA 200.2

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	03/18/2009				M Pattanayek	3/18/2009

TEST: ICP-MS

METHOD: EPA 200.8

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Arsenic	U	µg/L	0.93	5	M Pattanayek	3/18/2009
Barium	21	µg/L	2.5	5	M Pattanayek	3/18/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	3/18/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	3/18/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	3/18/2009
Cobalt	0.12J	µg/L	0.04	1	M Pattanayek	3/18/2009
Lead	0.10J	µg/L	0.10	1	M Pattanayek	3/18/2009
Manganese	0.63J	µg/L	0.42	1	M Pattanayek	3/18/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	3/18/2009
Thallium	0.20J	µg/L	0.03	1	M Pattanayek	3/18/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	3/18/2009

TEST: Mercury

METHOD: EPA 245.1

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	PENDING	µg/L	0.13		NOT REPORTED	/ /

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Preliminary Report

Results on this report should only be considered preliminary, and the lab should be contacted for Actual Final Results.

Lab-Sample Number: N00004280003
Project Name:
Sample Description: ROCKWOOD WTP
Sampler Project Name: FINISH
Project Site No.:
Station No.:
Date/Time Collected: 03/16/2009 09:20
Sampler's Name: DAVID BRADSHAW
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-DWS
Billing Code: 327.39-12
Send Report To: TDEC-DWS
Agency Invoiced: TDEC-DWS
Priority Date:
Date/Time Received: 03/16/2009 11:00
Received By: P D Wilson

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

TEST: Digestion Metals

METHOD: EPA 200.2

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	03/18/2009				M Pattanayek	3/18/2009

TEST: ICP-MS

METHOD: EPA 200.8

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Arsenic	U	µg/L	0.93	5	M Pattanayek	3/18/2009
Barium	U	µg/L	2.5	5	M Pattanayek	3/18/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	3/18/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	3/18/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	3/18/2009
Cobalt	0.08J	µg/L	0.04	1	M Pattanayek	3/18/2009
Lead	U	µg/L	0.10	1	M Pattanayek	3/18/2009
Manganese	U	µg/L	0.42	1	M Pattanayek	3/18/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	3/18/2009
Thallium	0.12J	µg/L	0.03	1	M Pattanayek	3/18/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	3/18/2009

TEST: Mercury

METHOD: EPA 245.1

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	PENDING	µg/L	0.13		NOT REPORTED	/ /

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Preliminary Report

Results on this report should only be considered preliminary, and the lab should be contacted for Actual Final Results.

Lab-Sample Number: N00004280004
Project Name:
Sample Description: ROCKWOOD WTP
Sampler Project Name: RAW
Project Site No.:
Station No.:
Date/Time Collected: 03/16/2009 09:25
Sampler's Name: DAVID BRADSHAW
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-DWS
Billing Code: 327.39-12
Send Report To: TDEC-DWS
Agency Invoiced: TDEC-DWS
Priority Date:
Date/Time Received: 03/16/2009 11:00
Received By: P D Wilson

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

TEST: Digestion Metals			METHOD: EPA 200.2			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	03/18/2009				M Pattanayek	3/18/2009

TEST: ICP-MS			METHOD: EPA 200.8			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Arsenic	U	µg/L	0.93	5	M Pattanayek	3/18/2009
Barium	25	µg/L	2.5	5	M Pattanayek	3/18/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	3/18/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	3/18/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	3/18/2009
Cobalt	0.13J	µg/L	0.04	1	M Pattanayek	3/18/2009
Lead	0.16J	µg/L	0.10	1	M Pattanayek	3/18/2009
Manganese	19	µg/L	0.42	1	M Pattanayek	3/18/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	3/18/2009
Thallium	0.08J	µg/L	0.03	1	M Pattanayek	3/18/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	3/18/2009

TEST: Mercury			METHOD: EPA 245.1			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	PENDING	µg/L	0.13		NOT REPORTED	/ /

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected